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HABIT NOTE ON SNIPE EEL.

While fishing for Red Snapper (*Neomaenis aya*) on the Argus Bank south-west of the Bermudas in the fishing steamer "Neptune," March 3, 1908, in about 30 fathoms of water, a snapper was taken weighing about 10 or 12 pounds. Attached to the posterior margin of the caudal of this large fish by its slender jaws, was a Snipe Eel (*Nemichthys scolapaceus*) 265 mm. long. The specimen being taken in this way gives good reason to believe that grasping the tails of fishes is the function of the divergent mandibles of these eels.

L. L. MOWBRAY,
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A FLORIDA FLYING FISH.

While connected with the Miami Aquarium, Mr. Louis L. Mowbray secured some marine fish material of considerable technical interest which he has presented to the American Museum of Natural History and which has been examined by the writer. Comment on a few of the species may be helpful to students of the West Indian fish fauna.

Halocypselus obtusirostris. A young flying fish, 34mm. in length to base of caudal, from near Miami, Florida, differs in several respects from the common two-winged flyingfish, *H. evolans*. There is in our collections a specimen of the latter, unfortunately

without definite locality, of almost the same size, 35mm., wherewith it can be compared; and the writer considers them distinct without hesitation, though closely related. The *obtusirostris* shows the several differences pointed out by Lütken,¹ in position of ventrals relative to snout and dorsal, extra scale in cross series, comparatively greater length of paired fins. In this small *obtusirostris* the pectorals reach quite to the upper base of the caudal, the ventrals are contained 1.5 in head. In the small *evolans* pectorals reach only to the beginning of the peduncle, ventrals are contained 1.7 in head. The color alone is significantly different. The ventrals, pale in *evolans*, are mostly blackish. The pectorals are dusky proximally and ventrad, blackest along the lower edge, the dark separated in a sharp slanting line from an extensive white or colorless distal portion of the fin, which is bordered along the top by a very narrow ill-defined dusky edge that appears also to cover the extreme fin tip. The small *evolans*, on the other hand, has a dusky pectoral, black distally and paling to white proximally and ventrally, with a rather broad lower border white throughout, involving the tip, and the upper edge very narrowly whitish. Roughly then, the fin colors of *obtusirostris* are the diametrical opposite or complement of those of *evolans*, a condition rather to be looked for in closely related species with the same range.² The forehead of this little *obtusirostris* slants down steeply from top of head to short snout, giving it an abnormal almost "simous" appearance, probably a normal juvenal character in the genus as the *evolans* has it also, only in less degree. Neither specimen has barbels.

Continued use of the genus *Halocypselus* for these flying fishes, versus the Linnæan genus *Exocoëtus* current for them at the moment, calls for explanation. In the writer's opinion there is nothing in

¹Lütken, 1877, Journ. Zool. (Gervais), vi., p. 107-127.

²Nichols, 1916, Am. Naturalist, L, p. 565-574.

present interpretation of Linnæan species affecting this genus, to preclude different interpretations in the future, or, if *Exocoëtus* (defined sufficiently for flying fishes as a whole, but not for any subdivision of them) be used at all, to make it less dangerously confusing in the future than it has been in the past. Why use a name at all if only confusion is to result? *Halocypselus* narrows flying fish possibilities sufficiently to leave no doubt as to intended identity of "*H. evolans*," though quite probably this specific name is not available here on one of several counts, and may be definitely and advantageously replaced by the researches of some practiced taxonomist.

J. T. NICHOLS,
New York, N. Y.

A BATFISH FROM THE AMAZON

The writer recently collected a very large Batfish, *Ogcocephalus vespertilio*, from fresh water in a mud hole some 800 or 900 miles up the Amazon River. It was 34cm. in total length, the rostrum long, contained about 6 times in length to base of caudal fin, and the tubercles on the mid line of the back prominent, especially on the tail where they covered almost the entire top of the peduncle. The size of this specimen and its occurrence in fresh water are worth placing on record.

ALEX. DE SOTO,
New York, N. Y.

A NEW SPECIES OF FROG FROM EASTERN SIBERIA

Rana zografi,³ sp. nov.

Vomerine teeth in two slightly oblique groups, the anterior border of which extends forward slightly beyond a line through the posterior border of the choanae. Snout rounded; the distance from orbit to tip of snout longer than width between black stripes at anterior border of orbit. Nostrils nearer the tip of snout than the eye. Interorbital space as wide as

³ Named in honor of my first teacher in Zoology, G. N. Zograf.

the upper eyelid. Diameter of tympanum about one-half the diameter of eye. First finger extending slightly beyond second. Inner metatarsal tubercle slightly compressed, less than one-half its distance from tip of inner toe. A small outer metatarsal tubercle. Tibio-tarsal joint of extended hind limb reaches the nostril or beyond. A glandular dorso-lateral fold. A dark temporal spot. Color above pale clay; a \wedge shaped dark marking between the shoulders; limbs transversely barred; underside whitish.

Two female specimens from Yevsyeyevka (ЕВЦЕЕВКА), Coast Province, East Siberia. Coll. N. Ikonnikov. May 20, 1910. Dimensions respectively in mm. Total length, 38.33; width of head, 13.11; fore limb, 27.5, 21.5; hind limb, 66, 52; tibia, 21, 17; inner toe, 4.5, 3; inner metatarsal tubercle, 2, 1.4.

P. V. TERENTJEV,
Moscow, Russia.

NOTES ON THE ANDEAN FROG, *TELMATOBIOUS CULEUS* (GARMAN).

During six months' fishing in the Andean highlands⁴, the writer frequently came into contact with *Telmatobius culeus*. It was often seen in the water and often taken unexpectedly with the seine. There was ample opportunity to verify the rather full ecological observations of the describer,⁵ and to add to them.

In agreement with Garman's somewhat hesitant conclusion, this frog was never observed to emerge from the water; was never found out of water; was never seen rising to the surface to breathe; and never seen swimming more than a few inches from the bottom. When approached by boat or *balsa* it swims to the nearest cover, unless the approach is made with

⁴ As a member of the Irwin Peruvian Expedition of Indiana University and traveling fellow of the University of Illinois.

⁵ Agassiz, Alexander, and Garman, S. W.; Exploration of Lake Titicaca; I. Fishes and Reptiles, by S. W. Garman; Bull. Mus. Comp. Zool. Harvard, Vol. III, No. 11; 1876; Plate I.

the greatest caution. It was a startling and grotesque spectacle to observe this squatting monster slowly and motionlessly take form where apparently there had been nothing before upon the oozy bottom. Also the inhabitants report, as they did to Garman, that the animal never leaves the water. There can be little doubt that it is wholly aquatic. Garman suggests that it may be more active at night. This is possible.

Air is always found in the lungs of those dissected. But at any rate it is not greatly dependent upon pulmonary respiration. The cutaneous respiration is apparently adequate. Garman describes and figures the baggy skin, but does not mention the extremely vascular character of the same. The cutaneous arteries and veins not only form a network more intricate than in most frogs, but are relatively larger than in others. The writer distended the lungs of a *culeus* artificially, and found them scarcely so large as those of a toad which was not one-third its size. The mean temperature of its habitat is low. This fact together with its totally aquatic habit and its inactivity means a lower metabolic rate and a lessened demand for oxygen.

Garman has evidently accepted too confidently the reports of the inhabitants with regard to the bird enemies of this frog. In the writer's opinion birds rarely feed upon it. Several species of birds which were said to eat frogs were killed and examined for their parasites and stomach contents. In no case was there any evidence to corroborate the observations of the natives. They state that the *pajaro bobo* (a heron) feeds exclusively upon frogs. The examination of stomachs never revealed any frog remains. Several reputed predatory bird species were found to live wholly upon plant material.

When held, dangled by a string, or teased, *culeus* emits great quantities of a sticky, milky secretion. The creases of the skin become filled with it. In all

probability this has an offensive taste, and is protective. Furthermore, in the littoral of lakes one finds side by side the maximum of both bird and frog populations.

Garman records as the food of the species: worms, crustacea, and molluscs. The writer found few of the first-named. Amphipods were very commonly obtained in stomach analyses and often snails.

The tongue, though free posteriorly, is not much elongated nor forked, and is ill-adapted for seizing terrestrial prey. No land forms were ever found among the stomach contents. Aquatic insects were frequently seen, but never terrestrial. Several times tadpoles, large and small, were found, and a number of fish, including an *Orestias* four inches in length.

No *culeus* were to be seen on the markets of the region of Lake Titicaca. No indigines were ever observed hunting them. No one despite considerable inquiry reported that they are edible. Hence it seems safe to conclude that in this region they are rarely if ever used as food. But at and about Lake Junin, five-hundred miles northward, the contrary is the case as regards the closely related *Batrachophrynus*. Market hunters search for water frogs of this latter genus in the reedy inlets of Lake Junin, and take them skilfully by means of long, crude gigs of their own contrivance, operating from *bálsas*. The frogs are marketed at Junin, and some of them are dispatched to Lima and Cerro de Pasco. It is possible that their use here for food originated with foreigners, including Americans.

WILLIAM RAY ALLEN,
Bloomington, Ind.

A NOTE ON THE RING-NECKED SNAKE IN WISCONSIN.

Until recent years the ring-necked snake, *Diadophis punctatus* (Linn.), was not known north and west of Illinois and the southern peninsula of Michi-

gan. In 1906 Ruthven reported it from Marquette, in the northern peninsula of Michigan (Rept. Geological Survey of Michigan for 1905, p. 111). In 1912 Dr. H. H. T. Jackson, of the U. S. Biological Survey, was so fortunate as to take a specimen at Rhinelander, Oneida County, in northern Wisconsin (Science, N. S., Vol. XXXIX, No. 1006, pp. 534-535). This specimen is now in our collections as No. U. W., 1902.

Recently I began the examination of the collection of Wisconsin reptiles made during the last four years by joint field expeditions of the U. S. Biological Survey, the Wisconsin Geological and Natural History Survey, and the University of Wisconsin. In doing so I came across a second Wisconsin specimen of this interesting snake. It was taken by Dr. Jackson and Mr. F. G. Hall, on Washington Island, northern Door County, July 17, 1917. It was found under a flat rock, a most characteristic locality for this species. This specimen is U. W. 2153 of our collections.

There is no record of its coloration during life, but in alcohol its colors agree closely with those of the Rhinelander specimen, as does the color pattern. The midventral spots, however, are much less numerous, there being only about 20, the first one on scale 68. In other respects the two specimens are in close agreement. The following figures apply to the Washington Island specimen; total length 415 mm.; tail 98; scales: ventral 144; subcaudal 55; supralabials 8-8; infralabials 8-8; oculars 2-2; temporals 1-1; dorsal scale rows 15. The head appears to be slightly broader than that of the Rhinelander form.

I may record here also that on July 1, 1921, late in the evening, I saw one of these snakes near my cottage at Ellison Bay, in northern Door County, a location on the mainland, about ten miles south of Washington Island. The snake was evidently on the chase, but lay quiet and nearly straightened out

when I saw it. At the moment I was not in position to take it, and when I returned later it was gone. Further search during the rest of July disclosed no more specimens. However, I expect to return to the locality next summer, with a better basis of knowledge for the hunt.

GEORGE WAGNER,
University of Wisconsin.

TWO GECKOS NEW TO THE FAUNA OF THE UNITED STATES.

Mr. George M. Gray, the well-known Curator of the Marine Biological Laboratory at Woods Hole, Massachusetts, during his various visits to Florida for the purpose of collecting material for the laboratory, has been in the habit of collecting other interesting animals from time to time. The reptiles he has usually submitted to me for examination, and with his permission I am placing on record two additions to the fauna of the United States. Both species are accidentally introduced to Key West by the agency of man, but seem to have gained a foothold whence in the course of time they are apt to extend their range. Both are geckos, one *Sphaerodactylus cinereus* MacLeay, from the neighboring island of Cuba, the other *Hemidactylus turcicus* (Linn.), from the Mediterranean region of Europe. Mr. Gray, in the winter of 1921-1922, obtained the former for the first time at Key West. *Hemidactylus turcicus* he encountered for the first time in 1915, and he obtained it again last winter, so it may be regarded as well established at Key West.

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